



United States Department of Agriculture

Animal and Plant Health Inspection Service

Pest Management - Plant Health Programs – Program Update

APHIS *Phytophthora ramorum* Program, 4th Quarter Summary; December 31, 2014

Background and History:

The APHIS-PPQ *P. ramorum* regulatory program initiated with the First Interim Rule February 14, 2002, has now completed its thirteenth year. With the inclusion of Trinity County in 2014 as the new quarantine area, in total there will be 15 counties designated as quarantined for sudden oak death (SOD) in California. In addition, 264 square miles in Curry County, in Oregon are also designated as quarantine areas. The remaining counties in California and Oregon, and the entire state of Washington are designated as regulated areas for inter-state shipment of nursery stock. Outside the currently quarantined counties *P. ramorum* has been detected only in the nursery environment and occasionally in streams connected to positive nurseries, however, no SOD-like disease outbreaks in the forest landscape have been reported. The USDA *P. ramorum* quarantine program, in place since 2002, has been successful in limiting the pathogen's artificial spread into the environment beyond the currently quarantine areas. The *P. ramorum* program in consultation with stakeholders has funded and developed several survey and remediation protocols, outreach and training initiatives. These efforts have not only safeguarded the natural environment but also benefitted the nursery industry by assuring the commercial movement of disease-free plants. In total, between January 1st to December 31, 2014, *P. ramorum* was reported in 19 host nurseries located in three regulated states (CA, OR and WA) and 4 non-regulated states (ME, NY, TX, and VA). Of the 19 positive nurseries, 11 were inter-state shippers and 8 non-interstate shippers. The interstate shippers were located in CA (1); OR (7), WA (1), VA (1) and TX (1). The positive intra-state (non-interstate shippers) were located in WA (1), OR (1), VA (3), ME (1) and NY (2). In 2014, only 8 of the inter-state shippers had actually shipped interstate triggering trace investigations which now have all been completed. Positive trace forwards from an interstate shipper in WA State were detected in three residential locations, one each in MA, OR on host plants and from a potting medium in one residential location in CT. *P. ramorum* was detected in *Camellia*, *Gaultheria*, *Pieris*, *Prunus*, *Rhododendron*, *Syringa*, *Vaccinium*, and *Viburnum* species, and also in Water, Potting Media and Soil.

USDA APHIS-PPQ and National Plant Board *P. ramorum* Safeguarding Meeting, October 15-16, 2014, Sacramento, California

The two day meeting between the National Plant Board (NPB) Leadership, APHIS PPQ and CPHST Program Staff and *P. ramorum* regulatory experts from CA, OR, WA, VA, AL, MO and PA provided an exchange on the implementation of the new Federal Order (FO) DA-2014-02. The FO went into effect on March 31, 2014; it impacts nurseries in both regulated and non-regulated states requiring new regulatory activities and compliance management for this domestic quarantine pathogen. The meeting accomplished three objectives; to provide APHIS PPQ input on methods and procedures under the new FO (regulatory surveys, protocols, critical control point assessments, mitigations and compliance agreements), to share program accomplishments in all affected states, and, to exchange best practices and compliance successes and challenges.

P. ramorum program regulatory officials in the three regulated states (CA, OR and WA) provided in-depth updates on program implementation in their states - past and current. They detailed the new FO regulatory activities and procedures in newly positive nurseries and in nurseries positive since March, 2011. VA also provided an update on their regulated nursery (positive since FO DA-2014-02 went into effect) as well as other survey and detection activities around the state. Representatives from the Southern, Eastern and Central Plant Boards presented *P. ramorum* survey and regulatory activities in their regions. PPQ representatives discussed the current program and budget planning process that allows a better platform for stakeholder input and improves program flexibility. PPQ received feedback from all states on the successes of the new FO and associated protocols, as well as ways to improve communication, trace investigation, inspection, sampling, testing and compliance program requirements and timelines.

The following key action items / topics were discussed:

- Implement changes in the sampling and diagnostic protocols based on feedback received.
- Develop ways to incentivize adoption of BMPs by nurseries.
- Re-evaluate the need to maintain the 'approved nursery' list in the three regulated states as well as other states w/ regulated nurseries.
- Share the proposed draft regulatory changes / rule that would formalize the recent FOs and assess the regulated status from currently regulated counties in CA, OR.
- Develop an APHIS *P. ramorum* program manual that would incorporate all the current protocols.
- Discuss the future research priorities at NORS-DUC with the nursery industry.
- Request from USDA-Forest Service an annual summary of all survey activities in the country and address the concerns raised by states with stream positives.
- Develop *P. ramorum* regional survey reports by NPB members. These would be useful during negotiations with trading partners.
- The state with a positive nursery (with or without APHIS assistance) should provide guidance to the nursery industry during trace investigations.
- To speed up regulatory actions and to improve communications between NPB states to deal with trace and / or regulatory issues with or without APHIS participation.
- Initiate discussions between NPB and APHIS to develop criteria for reinstatement of compliance agreements for regulated establishments. APHIS will facilitate dialogue between the NPB member states and await recommendations.
- Discuss feasibility of USDA adopting a non-regulatory or reduced regulatory approach similar to Free Stamp Program / Black Stem rust model or other harmonized programs between states.
- Organize the next *P. ramorum* safeguarding meeting on eastern sea board to provide a wider opportunity for NPB Regional Reps and States to exchange and receive in-depth updates and share best practices and challenges.

Inspections and sampling protocols for nurseries under the revised Federal Order DA-2014-02:
http://www.aphis.usda.gov/plant_health/plant_pest_info/pram/downloads/pdf_files/Inspection_Sampling_Protocol.pdf

Water sampling Protocol:

http://www.aphis.usda.gov/plant_health/plant_pest_info/pram/downloads/surveyplan/appendixI.pdf

Official Regulatory Protocol for Nurseries Containing Plants Infected with Phytophthora ramorum:

http://www.aphis.usda.gov/plant_health/plant_pest_info/pram/downloads/pdf_files/ConfirmedNurseryProtocol.pdf

As of December 31, 19 regulated nurseries located in CA (6), OR (10), WA (2) and VA (1) are required to notify non-regulated states of high risk genera shipments. In addition as before, all host nurseries shipping interstate from the *P. ramorum* quarantine areas are required to notify regardless of the presence or absence of *P. ramorum* in the nursery.

Program Updates: Nursery / Residential Detections to date (2000 – Dec 2014)

Year	# Nurseries	# States	Notes
2000, and prior	Zero		There were no reported nursery detections prior to 2001
2001	One	California	In infested area
2002	Zero		
2003	20	3	CA, OR, WA
2004	176	21	125 linked to one nursery's shipments
2005	99	7	
2006	62	11	
2007	23	6	
2008	28	8	
2009	26	11	Also, 6 landscape detections in 4 states; Data 2009 , Dec 31st
2010	34	13	33 nurseries, and 1 greenhouse, 2 landscape detections.
2011 Jan-Dec	23	5	23 nursery detections, 1 residential, 1 landscape
2012 Jan-Dec	33	8	33 Detections were in nurseries located in CA, OR, WA, NC, ME, NY, PA. IN and 3 Residential finds (ME, OR, CA)
2013 Jan-Dec	18	4	15 detections in CA (1), OR (10) and WA (6), NY (1). Detections were in 14 inter-state shippers and 4 retail, non-interstate shipping nurseries
2014 Jan-Dec	19	7	Positive nurseries were in CA (1); OR (8) and WA (2), NY (2); TX (1), ME (1) and VA (4). Detections were in 11 inter-state shippers and 8 non-interstate shipping nurseries. Residential detections one each in in MA, CT and OR.

Between, January 1 to December, 2014 *P. ramorum* has been reported in 19 host nurseries located in three regulated states (CA, OR and WA) and three non-regulated state (NY, TX and VA).

Of the 19 positive nurseries, 11 were inter-state shippers and 8 non-interstate shippers. The interstate shippers were located in CA (1); OR (7), WA (1), VA (1) and TX (1). The TX nursery was positive due to plants received from the positive nursery in CA. In 2014, only 8 of the inter-state shippers had actually shipped interstate triggering trace investigations which now have all been completed. Compliance agreement from one nursery in OR was suspended due to their inability to comply with Federal requirements. No host plants were shipped from the positive nursery in TX.

Positive trace forwards from an interstate shipper in WA State were detected in three residential locations, one each in MA, OR on host (*Camellia*) plants and from a potting medium in one residential location in CT. The positive intra-state (non-interstate shippers) were located in WA (1), OR (1), VA (3), ME (1) and NY (2).

***P. ramorum* detections in various Critical Control Points (plants, soil, water, potting media):**

Plants:

P. ramorum was detected in; **High Risk Hosts:** *Camellia*, *Pieris*, *Rhododendron* and *Viburnum*

Associated hosts: *Gaultheria*, *Prunus*, *Syringa* and *Vaccinium*;

Associated articles: Potting Media, Sanding water associated with soil, and water

Positive detections: January – December, 2014

POSITIVE DETECTION	STATE	COUNTY	DATE CONFIRMED
<i>Camellia japonica</i>	CA	Sacramento (Regulated)	5-May-14
<i>Camellia japonica</i> 'Chandler Elegans'	CA	Sacramento (Regulated)	3-Jun-14
<i>Camellia japonica</i> 'Daikagura'	CA	Sacramento (Regulated)	3-Jun-14
<i>Camellia japonica</i> 'Daikagura'	CA	Sacramento (Regulated)	3-Jun-14
<i>Camellia japonica</i> 'Daikagura'	CA	Sacramento (Regulated)	3-Jun-14
<i>Camellia japonica</i> 'Daikagura'	CA	Sacramento (Regulated)	3-Jun-14
<i>Camellia japonica</i> 'Mathotiana'	CA	Sacramento (Regulated)	5-May-14
<i>Camellia japonica</i> 'Mathotiana Supreme'	CA	Sacramento (Regulated)	3-Jun-14
<i>Camellia japonica</i> 'Mathotiana Supreme'	CA	Sacramento (Regulated)	3-Jun-14
<i>Camellia japonica</i> 'Mathotiana Supreme'	CA	Sacramento (Regulated)	29-Aug-14
<i>Camellia japonica</i> 'Virginia Sunrise'	VA	Hampton	30-May-14
<i>Camellia sasanqua</i> 'Chansonette'	CA	Sacramento (Regulated)	3-Jun-14
<i>Camellia sasanqua</i> 'Chansonette'	CA	Sacramento (Regulated)	3-Jun-14
<i>Camellia sasanqua</i> 'Chansonette'	CA	Sacramento (Regulated)	3-Jun-14
<i>Camellia sasanqua</i> 'Chansonette'	CA	Sacramento (Regulated)	3-Jun-14
<i>Camellia sasanqua</i> 'Chansonette'	CA	Sacramento (Regulated)	3-Jun-14
<i>Camellia sinensis</i>	MA	Plymouth	9-Jul-14
<i>Camellia sinensis</i> 'Sochi'	OR	Coos (Regulated)	13-Aug-14
<i>Camellia sinensis</i> 'Sochi'	WA	Lewis (Regulated)	29-May-14
<i>Camellia sinensis</i> 'Sochi'	WA	Lewis (Regulated)	29-May-14
<i>Gaultheria shallon</i>	OR	Tillamook (Regulated)	5-May-14
<i>Gaultheria shallon</i>	OR	Tillamook (Regulated)	5-May-14
<i>Gaultheria shallon</i>	OR	Tillamook (Regulated)	5-May-14
<i>Gaultheria shallon</i>	OR	Tillamook (Regulated)	5-May-14
<i>Gaultheria shallon</i>	OR	Tillamook (Regulated)	5-May-14
<i>Gaultheria shallon</i>	OR	Tillamook (Regulated)	5-May-14
<i>Gaultheria shallon</i>	OR	Tillamook (Regulated)	5-May-14
<i>Gaultheria shallon</i>	OR	Tillamook (Regulated)	5-May-14
<i>Gaultheria shallon</i>	OR	Tillamook (Regulated)	5-May-14
<i>Gaultheria shallon</i>	OR	Tillamook (Regulated)	5-May-14
<i>Gaultheria shallon</i>	OR	Tillamook (Regulated)	5-May-14
<i>Gaultheria shallon</i>	OR	Tillamook (Regulated)	5-May-14
<i>Gaultheria shallon</i>	OR	Tillamook (Regulated)	5-May-14
<i>Gaultheria shallon</i>	OR	Tillamook (Regulated)	5-May-14
<i>Gaultheria shallon</i>	WA	Lewis (Regulated)	29-May-14
<i>Pieris japonica</i>	VA	Virginia Beach	30-May-14
<i>Pieris japonica</i> 'Flaming Silver'	OR	Clackamas (Regulated)	2-Apr-14

POSITIVE DETECTION	STATE	COUNTY	DATE CONFIRMED
<i>Pieris japonica</i> 'Forest Flame'	OR	Clackamas (Regulated)	2-Apr-14
<i>Pieris japonica</i> 'Little Heath'	OR	Clackamas (Regulated)	2-Apr-14
<i>Pieris japonica</i> sp.	OR	Clackamas (Regulated)	2-Apr-14
<i>Pieris japonica</i> 'Valley Rose'	OR	Clackamas (Regulated)	19-May-14
<i>Pieris japonica</i> 'Valley Valentine'	OR	Clackamas (Regulated)	19-May-14
<i>Pieris taiwanensis</i>	OR	Clackamas (Regulated)	19-May-14
Potting Media	CT	Tolland	24-Jul-14
Potting Media	OR	Washington (Regulated)	9-May-14
<i>Prunus laurocerasus</i>	WA	King (Regulated)	1-May-14
<i>Rhododendron</i> 'Boule de Neige'	OR	Lane (Regulated)	30-Dec-14
<i>Rhododendron</i> 'Calsap'	WA	King (Regulated)	1-May-14
<i>Rhododendron</i> 'Calsap'	WA	King (Regulated)	1-May-14
<i>Rhododendron</i> 'Edith Bosley'	VA	Hampton	6-Jun-14
<i>Rhododendron</i> 'Hahn's Red' Azalea	OR	Tillamook (Regulated)	5-May-14
<i>Rhododendron</i> 'Holden'	OR	Clackamas (Regulated)	2-Apr-14
<i>Rhododendron</i> 'Nova Zembla'	ME	Lincoln	3-Oct-14
<i>Rhododendron</i> 'Purple Lace'	OR	Lane (Regulated)	5-Dec-14
<i>Rhododendron</i> 'Roseum Elegans'	NY	Suffolk	9-Jul-14
<i>Rhododendron</i> 'Roseum Elegans'	NY	Suffolk	9-Jul-14
<i>Rhododendron</i> 'Roseum Elegans'	OR	Columbia (Regulated)	14-Aug-14
<i>Rhododendron</i> 'Roseum Two'	OR	Columbia (Regulated)	14-Aug-14
<i>Rhododendron</i> 'Scintillation'	OR	Lane (Regulated)	12-Dec-14
<i>Rhododendron</i> 'Unique'	OR	Clackamas (Regulated)	28-Oct-14
<i>Rhododendron</i> 'Unique'	OR	Lane (Regulated)	12-Dec-14
<i>Rhododendron augustinii</i> 'Electra'	OR	Lane (Regulated)	30-Dec-14
<i>Rhododendron bureavii</i>	OR	Lincoln (Regulated)	08-Oct-14
<i>Rhododendron bureavii</i> x <i>pronum</i>	OR	Lincoln (Regulated)	18-Oct-14
<i>Rhododendron campylocarpum</i> ssp. <i>caloxanthum</i> 'Sunningdale'	OR	Lincoln (Regulated)	18-Oct-14
<i>Rhododendron citriniflorum</i> 'Horiaeum'	OR	Lincoln (Regulated)	18-Oct-14
<i>Rhododendron forrestii</i> var. <i>repens</i> x 'Noyo Chief'	OR	Lane (Regulated)	12-Dec-14
<i>Rhododendron proteoides</i>	OR	Lincoln (Regulated)	18-Oct-14
<i>Rhododendron</i> sp.	OR	Clackamas (Regulated)	25-Aug-14
<i>Rhododendron</i> sp.	OR	Lane (Regulated)	29-May-14
<i>Rhododendron</i> sp.	OR	Lane (Regulated)	29-May-14
<i>Rhododendron</i> sp.	OR	Lane (Regulated)	29-May-14
<i>Rhododendron</i> sp.	OR	Tillamook (Regulated)	5-May-14

POSITIVE DETECTION	STATE	COUNTY	DATE CONFIRMED
<i>Rhododendron sp.</i>	OR	Washington (Regulated)	9-May-14
<i>Rhododendron sp.</i>	OR	Washington (Regulated)	9-May-14
<i>Rhododendron sp.</i>	OR	Washington (Regulated)	9-May-14
<i>Rhododendron sp.</i>	OR	Washington (Regulated)	29-May-14
<i>Rhododendron sp.</i>	OR	Washington (Regulated)	29-May-14
<i>Rhododendron sp.</i>	WA	King (Regulated)	2-May-14
<i>Rhododendron williamsianum</i>	OR	Lane (Regulated)	30-Dec-14
Soil Sample	OR	Clackamas (Regulated)	29-May-14
Soil Sample	OR	Clackamas (Regulated)	29-May-14
Soil Sample	OR	Clackamas (Regulated)	29-May-14
Soil Sample	WA	Lewis (Regulated)	12-Jun-14
Soil Sample	WA	Lewis (Regulated)	12-Jun-14
Soil Sample	WA	Lewis (Regulated)	12-Jun-14
<i>Syringa vulgaris</i>	CA	Sacramento (Regulated)	7-May-14
<i>Syringa vulgaris</i> 'Madame Lemoine'	WA	King (Regulated)	29-May-14
<i>Syringa vulgaris</i> 'Ludwig Von Spaeth'	WA	King (Regulated)	22-Jul-14
<i>Vaccinium ovatum</i>	WA	Lewis (Regulated)	29-May-14
<i>Viburnum rhytidophyllum</i> 'Cree'	VA	Nelson	25-Jun-14
<i>Viburnum tinus</i> 'Spring Bouquet'	CA	Sacramento (Regulated)	7-May-14
<i>Viburnum tinus</i> 'Spring Bouquet'	CA	Sacramento (Regulated)	28-May-14
<i>Viburnum tinus</i> 'Spring Bouquet'	CA	Sacramento (Regulated)	28-May-14
<i>Viburnum tinus</i> 'Spring Bouquet'	CA	Sacramento (Regulated)	28-May-14
<i>Viburnum tinus</i> 'Spring Bouquet'	CA	Sacramento (Regulated)	28-May-14
<i>Viburnum tinus</i> 'Spring Bouquet'	CA	Sacramento (Regulated)	28-May-14
<i>Viburnum tinus</i> 'Spring Bouquet'	CA	Sacramento (Regulated)	28-May-14
<i>Viburnum tinus</i> 'Spring Bouquet'	CA	Sacramento (Regulated)	28-May-14
<i>Viburnum tinus</i> 'Spring Bouquet'	CA	Sacramento (Regulated)	28-May-14
<i>Viburnum tinus</i> 'Spring Bouquet'	CA	Sacramento (Regulated)	28-May-14
<i>Viburnum tinus</i> 'Spring Bouquet'	CA	Sacramento (Regulated)	28-May-14
<i>Viburnum tinus</i> 'Spring Bouquet'	CA	Sacramento (Regulated)	28-May-14
<i>Viburnum tinus</i> 'Spring Bouquet'	CA	Sacramento (Regulated)	28-May-14
<i>Viburnum tinus</i> 'Spring Bouquet'	CA	Sacramento (Regulated)	28-May-14
<i>Viburnum tinus</i> 'Spring Bouquet'	CA	Sacramento (Regulated)	28-May-14
<i>Viburnum tinus</i> 'Spring Bouquet'	CA	Sacramento (Regulated)	28-May-14
<i>Viburnum tinus</i> 'Spring Bouquet'	CA	Sacramento (Regulated)	28-May-14
<i>Viburnum tinus</i> 'Spring Bouquet'	CA	Sacramento (Regulated)	28-May-14
<i>Viburnum tinus</i> 'Spring Bouquet'	CA	Sacramento (Regulated)	28-May-14
<i>Viburnum tinus</i> 'Spring Bouquet'	CA	Sacramento (Regulated)	28-May-14

POSITIVE DETECTION	STATE	COUNTY	DATE CONFIRMED
<i>Viburnum tinus</i> 'Spring Bouquet'	CA	Sacramento (Regulated)	28-May-14
<i>Viburnum tinus</i> 'Spring Bouquet'	CA	Sacramento (Regulated)	28-May-14
<i>Viburnum tinus</i> 'Spring Bouquet'	CA	Sacramento (Regulated)	28-May-14
<i>Viburnum tinus</i> 'Spring Bouquet'	CA	Sacramento (Regulated)	28-May-14
<i>Viburnum tinus</i> 'Spring Bouquet'	CA	Sacramento (Regulated)	28-May-14
<i>Viburnum tinus</i> 'Spring Bouquet'	CA	Sacramento (Regulated)	28-May-14
<i>Viburnum tinus</i> 'Spring Bouquet'	CA	Sacramento (Regulated)	28-May-14
<i>Viburnum tinus</i> 'Spring Bouquet'	CA	Sacramento (Regulated)	28-May-14
<i>Viburnum tinus</i> 'Spring Bouquet'	CA	Sacramento (Regulated)	28-May-14
<i>Viburnum tinus</i> 'Spring Bouquet'	TX	Tarrant	10-Jun-14
<i>Viburnum tinus</i> 'Spring Bouquet'	WA	King (Regulated)	2-May-14
Water (Bait) Sample	NY	Nassau	6-Jun-14
Water (Bait) Sample	NY	Nassau	6-Jun-14
Water (Bait) Sample	NY	Nassau	6-Jun-14
Water (Bait) Sample	NY	Suffolk	6-Jun-14
Water (Bait) Sample	NY	Suffolk	6-Jun-14
Water (Bait) Sample	NY	Suffolk	6-Jun-14
Water (Bait) Sample	OR	Clackamas (Regulated)	19-May-14
Water (Bait) Sample	OR	Lincoln (Regulated)	08-Oct-14
Water (Bait) Sample	VA	Hanover	25-Jun-14
Water (Bait) Sample	VA	Virginia Beach	9-May-14
Water (Bait) Sample	VA	Virginia Beach	28-May-14
Water (Bait) Sample	WA	Lewis (Regulated)	29-May-14
Water (Bait) Sample	WA	Lewis (Regulated)	25-Jun-14
Water (Bait) Sample	WA	Lewis (Regulated)	25-Jun-14
Water (Bait) Sample	WA	Lewis (Regulated)	25-Jun-14

Notes: *Camellia* (20); *Gaultheria* (14); *Pieris* (8); Potting Media (2); *Prunus* (1); *Rhododendron* (34); Soil Sample (6); *Syringa* (3); *Vaccinium* (1); *Viburnum* (32); Water (Bait) Sample (15)

Dated: December 31, 2014, Prakash K. Hebbar *Phytophthora ramorum* National Policy Manager, USDA-APHIS-PPQ, APHIS Headquarters, Riverdale, Maryland; Stacy Scott, National Operations Manager, USDA-APHIS-PPQ, Ft. Collins, Colorado.

www.aphis.usda.gov/plant_health/plant_pest_info/pram